

<b>Task # II-1: Dispatch First Responders and Establish Initial Communications</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> 911 Center/Dispatch Center
<b>Response Element:</b> 911 Center Staff/Dispatch Center Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Receipt of incident information, direct observation, and 911 call.</p> <p><b>Conditions:</b> Person-to-person, and electronic or telephone conversation.</p> <p><b>Expected Outcomes:</b> 911 center receives information and dispatches appropriate response units.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Record information.</li> <li>2. Analyze 911 calls for information, which may indicate a weapons of mass destruction (WMD) incident (e.g., large volume of calls reporting sick or injured persons with no known reason, reports of mist or cloud, unusual odors, chemical exposure symptoms, explosions).</li> <li>3. Assess response requirements (if not automatic based on dispatch matrix already determined).</li> <li>4. Alert response units.</li> <li>5. Convey hazard information to responders: <ol style="list-style-type: none"> <li>a. Reported signs/symptoms.</li> <li>b. Approach to incident (upwind).</li> <li>c. Staging areas.</li> <li>d. Use of personal protective equipment (PPE) if available.</li> </ol> </li> <li>6. Alert other dispatchers and agencies.</li> <li>7. Notify adjacent jurisdiction 911 centers and nearby military bases.</li> <li>8. Identify communication mechanisms being used by various response elements (e.g., police, fire, emergency medical services [EMS]).</li> <li>9. Coordinate communication requests for resources.</li> <li>10. Address technical difficulties with interoperability among response elements and communication overloads.</li> <li>11. Establish and maintain communication link between incident site and the Emergency Operations Center (EOC).</li> </ol> <p><b>Consequences:</b> Appropriate first responders are quickly dispatched to the incident scene.</p> <p><i><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</i></p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

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### Communications Protocols

1. Was the initiation of the alert, notification, and dispatch of assets conducted in accordance with established procedures? Discuss areas that may require improvement or additional attention if appropriate.
2. Were the pre-established protocols for response adequate to ensure the correct number and type of units and equipment were dispatched?
  - a. Was the response matrix appropriate for the call type?
  - b. Were secondary responders notified?
3. How did dispatch ensure that appropriate administrative personnel and city officials were alerted/notified of the incident?
4. What procedures were established to maintain a communications link or liaison with the incident scene and the EOC?
5. Was the 911 center prepared to handle calls from people displaying panic or anxiety who were not at imminent risk? Did their preparation include appropriate referrals to mental health hotlines or other resources?

### Information Assessment

6. What pertinent data was collected to facilitate the response?
7. Describe the adequacy of protocols to obtain threat and victim information from callers, especially as they related to a terrorist incident.
8. Did the initial notification contain information needed to execute a safe response?
9. Were personnel able to use data to identify trends and patterns outside normal response for which they were dispatched?

### Interoperability

10. Describe how communications were maintained between the various response elements (e.g., police, fire, EMS). How were communication requests for resources coordinated between agency dispatchers?
11. How did dispatch facilitate communications between responding units with interoperability difficulties?
12. How effective was dispatch in establishing liaison with the EOC?

### Communications System Capacity

13. Was the communications system adequate to handle calls and demands?
14. How did dispatch respond to communications overload?
15. What capability exists to provide backup personnel for dispatch during a critical incident?
16. What procedures were in place to address personnel rotation?

<b>Task # II-2: Make Immediate Incident Scene Reports</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> Incident Site
<b>Response Element:</b> First Responders	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Observations of witnesses, and the incident scene.</p> <p><b>Conditions:</b> Availability of time, incident scene limitations (e.g., injuries, facility damage, fire, wreckage), response team composition, availability of communications systems, weather, and knowledge of plans and procedures.</p> <p><b>Expected Outcomes:</b> Prompt and accurate (as possible) immediate informal report(s) from the incident scene.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Arrive at incident scene from safe direction.</li> <li>2. Stop at safe distance and quickly obtain information that describes the incident: <ol style="list-style-type: none"> <li>a. Number and nature of injuries.</li> <li>b. Description and nature of the incident scene (type of event).</li> </ol> </li> <li>3. Communicate the information available to the appropriate dispatch center.</li> <li>4. Promptly request additional response units as necessary.</li> </ol> <p><b>Consequences:</b> Incident Commander (IC) is able to analyze data, assess the seriousness of the incident, make an initial estimate of the incident's impact, and mobilize appropriate response.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

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### Initial Assessment

1. What initial information was collected (e.g., number of bodies, wind direction)?
2. Did first responders recognize event as terrorism event? What type of event (e.g., biological, chemical, explosive)?
3. What information was used to make this assessment (e.g., victim symptoms, agent-specific signage)?
4. How quickly was the determination made?
5. Did responding units take proper precautions? What were they?
6. How did initial units recognize a seriously escalating situation?
7. How did initial units convey this to other incoming units?
8. How did responding units consider possible secondary devices?

### Coordination and Communication

9. Which responders arrived first?
10. What information did first arriving responders relay to the communications center? Were the initial reports adequate?
11. In what order did other responders arrive, and how did they coordinate?
12. Were additional and/or specialty units requested? Which ones?

### Protection and Equipment

13. Were responding units equipped with appropriate personal protective equipment (PPE) to handle the situation?
14. Were any response personnel contaminated?
15. Did responders reassess PPE needs after identifying the incident?
16. Was appropriate equipment readily available?
17. Was equipment properly maintained and calibrated?
18. Did responders demonstrate proficiency in using equipment?
19. Was interchangeable or compatible equipment considered?
20. Was there any need for psychological debriefing or other followup with first responders? If so, was appropriate information provided or were referrals made?

<b>Task # II-3: Detect and Identify Agent/Source</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> Incident Site
<b>Response Element:</b> HazMat	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Preliminary information on agent or source from first responders' observations of signs and symptoms.</p> <p><b>Conditions:</b> Surveying, sampling, and monitoring equipment and teams, recognition and analysis of signs and symptoms presented by victims, and availability of laboratory.</p> <p><b>Expected Outcomes:</b> Hazardous materials (HazMat) survey team determines type of and/or identifies agent from collected data.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. From perimeter of scene area, begin monitoring for O<sub>2</sub> levels, flammable atmospheres, toxic gases, and radioactivity.</li> <li>2. Don appropriate personal protective equipment (PPE) and assess hazards upon approaching scene.</li> <li>3. Verify and communicate radiation exposure limits to teams.</li> <li>4. Set up equipment and collect information: <ol style="list-style-type: none"> <li>a. To identify agent or radiological source.</li> <li>b. To characterize the incident (e.g., meteorological information, readings from air monitoring devices).</li> <li>c. About other hazards of concern (e.g., fire, explosives, other HazMat).</li> <li>d. To determine location of airborne plume and assess particulate deposition on the ground from airborne plume.</li> <li>e. For use in controlling first responders' exposure.</li> </ol> </li> <li>5. Notify IC of findings.</li> <li>6. Send samples to laboratory as needed.</li> </ol> <p><b>Consequences:</b> Incident Command System (ICS) and the Emergency Operations Center (EOC) are able to obtain sufficient information to begin hazard assessment.</p> <p><b>Note:</b> These are "typical" steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction's plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

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### Responder Protection

1. Were HazMat personnel equipped with appropriate PPE to handle the situation?
2. What radiation exposure limits were set for responders and how were they communicated? (e.g., reporting level, turn back level, lifesaving level).
3. Were any personnel contaminated, and if so, how?
4. If radioactive material release is suspected, what steps did responders take to protect themselves? What information was used to make the decision regarding protection of first responders?

### Agent Identification Procedures and Equipment

5. How was agent identified (e.g., what equipment was used, where was sampling conducted)?
6. How was the presence of contaminant confirmed (or determined not to exist)?
7. If a radiological assessment was conducted, what equipment was used?
  - a. Was equipment sufficient to detect all radiation types (alpha, beta, and gamma)?
  - b. Was equipment sufficient to detect the potential range of radiation intensity (i.e., from microrems/hour to thousands of rems/hour)?
8. Was sampling conducted in hot and warm zones? Was appropriate equipment readily available?
9. Did the equipment used function properly?
10. Did personnel follow standard procedures for using the equipment?
11. Was interchangeable or compatible equipment considered?
12. Was specific equipment lacking that could have been useful in agent identification?
13. Could agent identification time be shortened? How?
14. Was agent sampling coordinated among all sampling teams, including those provided by other agencies or jurisdictions?
15. Were all teams proficient with the equipment being used (particularly when multiple teams share equipment)?
16. What laboratory services were used to investigate and identify the cause of the biological, chemical, or radiological emergency?
  - a. Does laboratory have capability to analyze type of agent?
  - b. Did staff follow labeling and chain of custody protocols?
17. Did public health agency follow up on disease and illness cluster?

### Notification

18. Once the agent was identified, who was notified and how was notification made (e.g., EOC, law enforcement, hospitals)?
19. Whose responsibility was it to notify all the agencies on the scene? How was this done?
20. Were any notifications to first responders missed? Why?
21. If appropriate, was correct information sent to the National Response Center (NRC) in a timely manner using the NRC Standard Report Form?
22. Was the agent information relayed to affected agencies?

<b>Task # II-4: Collect Input for Health/Hazard Assessment</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Public Health
<b>Response Element:</b> EOC Staff/Public Health Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Initial and periodic reports describing the incident; hazard description source documents; results from monitoring, sampling, and surveying operations; results from epidemiological investigation; local public health and medical facilities; guidance from Incident Commander (IC).</p> <p><b>Conditions:</b> Availability of time, availability of communications systems, meteorological monitoring system, emergency management information system, changing conditions at the incident site, changing meteorological conditions, epidemiological results, and knowledge of plans and procedures.</p> <p><b>Expected Outcomes:</b> Analysts are able to produce initial and subsequent health/hazard assessment and predictions.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Receive and confirm initial reports about the incident.</li> <li>2. Collect other information to characterize the incident (e.g., meteorological information; readings from air monitoring devices and radiation meters; and epidemiological data, lab results, reports from hospitals, clinics and local public health departments).</li> <li>3. Collect information about other hazards of concern (e.g., fire, explosives, other hazardous materials [HazMat]).</li> <li>4. For releases of radioactive material: <ol style="list-style-type: none"> <li>a. Verify that background radiation level was detected.</li> <li>b. Collect sufficient data to calculate downwind doses and determine need for shelter-in-place or evacuation decisions.</li> <li>c. Compare radiation levels to protective action guides.</li> <li>d. Verify that responders were practicing as low as reasonably achievable (ALARA).</li> <li>e. Determine or estimate source term.</li> </ol> </li> <li>5. Continuously review collected data to support and/or refine the health/hazard assessment (for responders and the public). Request additional information as required.</li> <li>6. Archive all data in formats that allow for quick retrieval and subsequent analysis, investigation, and official reports.</li> </ol> <p><b>Consequences:</b> Production of health/hazard assessments and predictions is not delayed or compromised by incorrect or incomplete information.</p> <p><b>Note:</b> <i>These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</i></p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

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### Information Collection

1. From whom was information collected for the hazard and/or health assessment (e.g., IC, first responders)?
2. What specific information was collected (e.g., how was meteorological data obtained? Where were readings taken?)
3. Who was responsible for collecting information for making the hazard prediction (e.g., agency representatives at the Emergency Operations Center [EOC], public health?)
4. Did the EOC review appropriate protective action guides?

### Coordination

5. Were plans and procedures in place for collecting information to make hazard assessments? Were they sufficient?
6. Comment on frequency and adequacy of the information flow between various agencies involved in information sharing:
  - a. Incident Command System (ICS)/Unified Command System (UCS) and the EOC.
  - b. EMS/hospital and the EOC.
  - c. Laboratory and the EOC or Public Health Emergency Coordination Center (ECC).
  - d. Public health and the EOC.
7. What could have been done to improve the information flow?

<b>Task # II-5: Make Health/Hazard Assessments and Predictions</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Public Health
<b>Response Element:</b> EOC Staff/Public Health Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Data collected for making health/hazard assessments and predictions.</p> <p><b>Conditions:</b> Availability of time; availability of analysis tools; changing conditions relative to the incident; guidance and priorities from the Incident Commander (IC); results from local hospitals, clinics, and public health departments; and knowledge of plans and procedures.</p> <p><b>Expected Outcomes:</b> Hazard area plots (maps) showing risk areas and a predicted hazard area or distribution of health threat statewide, identification of populations at risk, protective action options, monitoring guidance, and information on projected plume behavior.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Determine the initial actual and predicted hazard area.</li> <li>2. For biological incidents, determine the actual areas of State impacted (identify communities, numbers of exposed, numbers of potentially exposed, and numbers of symptomatic in each community and statewide).</li> <li>3. If an airborne hazard, in coordination with activities potentially underway by the IC: <ol style="list-style-type: none"> <li>a. Determine plume direction and speed, populations at risk, and transboundary issues. Attempt to obtain local meteorological data.</li> <li>b. Support field operations by identifying areas to monitor beyond the immediate incident scene.</li> <li>c. Predict plume behavior to aid in protective action decisionmaking.</li> <li>d. Conduct new analyses in near-real time to reflect changing conditions and site mitigation efforts.</li> </ol> </li> <li>4. Conduct consequence management analyses to determine whether other populations might become at risk and to determine areas to conduct monitoring operations to validate the hypothetical situation.</li> <li>5. Confirm the validity and reliability of model outputs.</li> <li>6. Provide monitoring/surveillance and modeling/analysis results to surrounding communities.</li> <li>7. If a radiological incident, use collected data to assess projected dose for shelter-in-place and evacuation decisions. Determine areas of immediate impact to water and agriculture.</li> </ol> <p><b>Consequences:</b> Accurate information is developed as input to making protective action decisions (PADs) (e.g., evacuation, shelter in place). Appropriate adjustments are made as conditions change.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

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### Coordination and Communication

1. Was information/data coordinated and communicated among response elements?
2. Does the Emergency Operations Center (EOC) have a call-down list for other agencies to obtain additional analytical support and resources (e.g., State, regional, tribal, Federal)? Was it used?
3. Were progress reports given to all agencies regarding the hazard assessment? How often and by whom?

### Data Analysis

4. What mapping and modeling capabilities were used?
  - a. Were they adequate?
  - b. Were multiple models used and did the results compare within an order of magnitude?
5. What hazard modeling software was used to make airborne plume predictions?
  - a. What assumptions were used as data inputs in the model?
  - b. What was the source of meteorological data? Was it accurate? Was it updated?
  - c. How did the hazard plume generated by the model compare with "exercise truth"?
  - d. Were data limitations and error potential in the model provided to decisionmakers?
6. If the release involved radioactive material:
  - a. How was determination of radiological dispersion made?
  - b. How were radiological isodose rate lines plotted (e.g., radial plot, grid plot contour lines)?
  - c. Were radiological area surveys, personnel surveys, and equipment surveys conducted?
7. For a biological incident, did public health use epidemiological capacity (or access to such capacity) to analyze for biological emergency?
  - a. What epidemiological tools were used for hazard assessment?
  - b. Was other technical expertise used as appropriate in the investigation (environmental health scientists, hazardous materials [HazMat], chemist, veterinary epidemiologist)?
8. Did the EOC, in consultation with the IC, analyze information/data to formulate mitigation and corrective actions? Comment on the capability of the EOC to assess data.

<b>Task # II-6: Coordinate Monitoring, Sampling, and Surveying Operations</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Incident Site
<b>Response Element:</b> EOC Staff/ICS/UCS	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Hazard analysis results showing predicted extent of the hazard. Monitoring, sampling, and surveying requests from the incident site.</p> <p><b>Conditions:</b> Availability of time; availability of communications systems; availability of equipment and teams; availability of laboratory support; meteorological and topographical conditions; plans and procedures; pre-established data quality objectives; and agreements with surrounding jurisdictions for monitoring, sampling, and surveying.</p> <p><b>Expected Outcomes:</b> Monitoring, sampling, and surveying teams deployed to the correct locations to collect information that accurately characterizes the hazard area.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Develop a wide area monitoring and sampling plan.</li> <li>2. Coordinate with field locations and other affected jurisdictions to determine safe routes to monitoring and sampling locations.</li> <li>3. Modify and implement health and safety plan.</li> <li>4. Dispatch monitoring and sampling teams and track deployment.</li> <li>5. Coordinate monitoring, sampling, and surveying teams to ensure consistency and compatibility.</li> <li>6. Arrange for laboratory testing of samples. Obtain hard copy sampling assay results from laboratories.</li> <li>7. Redeploy monitoring and sampling teams based on results of monitoring, sampling, and laboratory analysis or changes in priorities made by the Incident Commander (IC) or Emergency Operations Center (EOC).</li> <li>8. Coordinate the return of deployed monitoring assets.</li> <li>9. Store monitoring and sampling results in a hazard assessment and prediction database.</li> </ol> <p><b>Consequences:</b> Monitoring and sampling results are available for use in making decisions about protecting emergency responders and populations at risk.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

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### Preparation

1. What information was provided in the monitoring and sampling plan (e.g., field screening, sample chain-of-custody, independent confirmation of sample results)?
  - a. Was plan consistent with hazard analysis results?
  - b. Did plan prioritize sampling and laboratory analysis?
2. What information did the EOC or IC provide to sampling and monitoring teams? Did information include:
  - a. Safe routes to each monitoring and sampling location?
  - b. Access to public and private property?
3. What radiation exposure limits were set for responders and how were they derived?
  - a. Reporting level:
  - b. Turnback (callback) level:
  - c. Lifesaving level:
4. Was a radiological survey plan prepared and used? If so, how did it address:
  - a. Area survey?
  - b. Personnel survey?
  - c. Equipment survey?
  - d. Water, food, and agricultural products?
5. How were radiological isodose rate lines plotted (e.g., radial plot, grid plot contour lines)?

### Operation and Coordination

6. Comment on the appropriateness and effectiveness of monitoring and sampling operations by all resources utilized.
7. Did laboratory demonstrate capability to follow procedures for receiving samples, including logging of information, preventing contamination of the laboratory, and preventing contamination of samples?
8. Were data transmitted affectively and efficiently between the field and the EOC?
9. Were chain-of-custody procedures followed?
10. Was information that was developed coordinated and shared among the response agencies?
11. Which agency coordinated the monitoring and sampling operations?
12. Would effectiveness have been enhanced if a different agency were lead? Which agency and why?

<b>Task # II-7: Conduct Monitoring, Sampling, and Surveying Operations</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> Incident Site/In Community
<b>Response Element:</b> Environmental Protection/HazMat	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Instructions to monitor and sample for the presence of agent.</p> <p><b>Conditions:</b> Availability of time; availability of communications systems; availability of equipment and teams; availability of laboratory support; availability of position-locating tools; meteorological and topographical conditions; physical constraints at monitoring and sampling locations; plans and procedures; pre-established data quality objectives; and agreements with surrounding jurisdictions for monitoring, sampling, and surveying.</p> <p><b>Expected Outcomes:</b> Monitoring, sampling, and surveying teams collect authentic credible information about agent hazards.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Perform pre-operation checks and inventory of vehicles, equipment, supplies, and systems.</li> <li>2. Bring all vehicles and equipment needed for field operations to operating status; field check monitoring equipment.</li> <li>3. Establish reliable communication with the hazard analysts coordinating the monitoring and sampling operations.</li> <li>4. Don appropriate personal protective equipment (PPE).</li> <li>5. Proceed to designated monitoring or sampling locations by designated safe routes.</li> <li>6. Conduct monitoring and sampling operations.</li> <li>7. Maintain sample chain of custody and avoid cross contamination.</li> <li>8. Validate monitoring results in the field.</li> <li>9. Assay field samples and deliver to approved laboratories.</li> <li>10. Collect sampling team dosimeter information, if applicable.</li> <li>11. Report results to the Emergency Operations Center (EOC).</li> <li>12. Process equipment and personnel for decontamination.</li> </ol> <p><b>Consequences:</b> Monitoring and sampling information is not compromised by lack of authenticity or credibility.</p> <p><i><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</i></p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

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### Preparation

1. What radiation exposure limits were set for responders and how were they derived?
  - a. Reporting level:
  - b. Turnback (callback) level:
  - c. Lifesaving level:
2. For a radiological incident, was a radiological survey plan prepared and used? If so, how did it address:
  - a. Area survey?
  - b. Personnel survey?
  - c. Equipment survey?
  - d. Water, food, and agricultural products?

### Equipment and Operations

3. What equipment was used to conduct monitoring, surveying, and sampling?
  - a. Was the equipment used appropriate for the incident?
  - b. Did the teams use any innovative or unusual procedures?
4. Where were monitoring, surveying, and sampling conducted?
  - a. Which agency determined these locations?
5. Were data quality objectives met?
6. Were chain-of-custody procedures followed?
7. Did teams validate monitoring results in the field consistent with monitoring protocols? Were field samples collected consistent with sampling protocols? Were the protocols effective?
8. For a radiological incident, what instruments were used to measure cumulative radiation dose for responders? Were dose records maintained? How frequently were cumulative radiation doses reported by the team?

### Coordination

9. Were available resources properly coordinated on scene?
10. How could monitoring, surveying, and sampling operations be improved?
11. How frequently did monitoring, surveying, and sampling teams report their results? What information was provided?

<b>Task # II-8: Conduct Epidemiological Trace-Forward Investigation</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Public Health
<b>Response Element:</b> Public Health Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Initial reports describing the incident (includes information about the agent and potential for exposure); periodic update reports describing changes in the disease transmission pattern; results from epidemiological investigation, local hospitals, and counties; reports from Public Safety Answering Points (PSAPs); and input from local health officials.</p> <p><b>Conditions:</b> Availability of time, availability of communications systems, emergency management information system, changing conditions, epidemiological results, and knowledge of plans and procedures.</p> <p><b>Expected Outcomes:</b> Assessment of the seriousness of health impacts downstream from incident source. The purpose is to determine and document the distribution and production chain so as to identify additional persons at risk for exposure to the agent.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Receive and confirm initial reports about incident.</li> <li>2. Request additional information from first responders, public health, and medical experts.</li> <li>3. Collect information (e.g., epidemiological data; lab results; reports from hospitals, clinics, local public health departments, law enforcement) to determine: <ol style="list-style-type: none"> <li>a. Nature of disease or health impact.</li> <li>b. Geographic location and possible spread of disease or health impact.</li> <li>c. Disease time factors (time between when symptoms appear and death).</li> <li>d. Develop case definition.</li> </ol> </li> <li>4. Develop models to predict disease progression or health impact.</li> <li>5. Identify other possible protective action recommendations (PARs) to the general public.</li> <li>6. Link epidemiology of medical care with actual clinical practice.</li> <li>7. Continuously review collected data to support and refine the epidemiological trace-forward investigation. Request additional information as required.</li> <li>8. Archive all data in formats that allow for quick retrieval for subsequent analysis, investigation, and official reports.</li> <li>9. Evaluate the psychosocial impact and how/whether this was adequately addressed.</li> </ol> <p><b>Consequences:</b> Public health officials can institute protective actions to disrupt epidemiological progression.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

*Upon completion of the day's exercise play, evaluators should compile their observations into a chronological narrative of events, describing outcomes achieved or not achieved. For any outcomes that are not achieved, the evaluator should analyze the sequence of events and attempt to determine the cause using the questions **at right**. The questions **below** may further help determine root cause.*

- ✓ What happened?
- ✓ What was supposed to happen?
- ✓ If there is a difference, why?
- ✓ What is the impact of that difference?
- ✓ What should be learned from this?
- ✓ What corrective actions are recommended?

1. When did the laboratory identify the agent?
2. When was the agent identified?
3. How were estimates of the rate of disease or health impact progression made?
4. How was knowledge of the agent used to determine the method of disease or health impact production and transmission?
5. What recommendations were made to prevent further spread of the disease or further health impact?
6. Were public health officials monitoring the community surveillance system for anomalies?

<b>Task # II-9: Conduct Epidemiological Trace-Back Investigation</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> Public Health
<b>Response Element:</b> Public Health Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Initial reports describing the incident; periodic update reports describing changes in the disease transmission pattern or health impacts; results from epidemiological investigation, local hospitals, and counties; reports from PSAPs; and input from local health officials.</p> <p><b>Conditions:</b> Availability of time, availability of communications systems, emergency management information system, changing conditions, epidemiological results, and knowledge of plans and procedures.</p> <p><b>Expected Outcomes:</b> Assessment of the seriousness of the incident and determination of the origin of the initial contamination.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Receive and confirm initial reports about the incident.</li> <li>2. Request additional information from first responders, public health, and medical experts.</li> <li>3. Collect other information to characterize the incident (e.g., epidemiological data; lab results; reports from hospitals, clinics and local public health departments, law enforcement, emergency medical services [EMS], and poison control).</li> <li>4. Link epidemiology of medical care with actual clinical practice.</li> <li>5. Continuously review collected data to support the epidemiological trace-back investigation. Request additional information as required.</li> <li>6. Continuously monitor reports and other data to change or refine the investigation.</li> <li>7. Coordinate investigation with law enforcement officials.</li> <li>8. Archive all data in formats that allow for quick retrieval for subsequent analysis, investigation, and official reports.</li> </ol> <p><b>Consequences:</b> Public health professionals contain and mitigate the source to reduce the potential for further risk of exposure to the agent.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

*Upon completion of the day's exercise play, evaluators should compile their observations into a chronological narrative of events, describing outcomes achieved or not achieved. For any outcomes that are not achieved, the evaluator should analyze the sequence of events and attempt to determine the cause using the questions **at right**. The questions **below** may further help determine root cause.*

- ✓ What happened?
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- ✓ If there is a difference, why?
- ✓ What is the impact of that difference?
- ✓ What should be learned from this?
- ✓ What corrective actions are recommended?

### Epidemiology

1. Was the agent correctly identified?
2. How was information developed about the agent and its properties forwarded to criminal investigative authorities?
3. Were epidemiologists able to make estimates of the likely method of agent delivery (e.g., aerosol, food supply, water supply, infected vector)?
4. How were estimates of the rate of progression severity?
5. How were estimates from rate of progression of the severity of symptoms determined?
6. Was knowledge obtained from the criminal investigation integrated with the public health investigation to accelerate source identification? How?
7. What recommendations were made to contain the disease at its source?

### Agent Properties

8. What determinations were made regarding the agent properties, such as:
  - a. Likely method of dissemination?
  - b. Human transmissibility?
  - c. Incubation period?
  - d. Lethality?
  - e. Vaccine/treatment efficacy?

<b>Task # II-10-B: Transport Clinical Specimens to Reference Laboratory in Laboratory Response Network</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Public Health/Health Care Facilities
<b>Response Element:</b> EOC Staff/Public Health Staff/Health Care Facilities Staff	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

  

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Clinical specimens collected from health care facilities, medical examiner (ME) office, field stations, incident site, and screening stations.</p> <p><b>Conditions:</b> Availability of time; availability of communications systems; availability of laboratory support, plans and procedures, and memorandums of agreement (MOAs) and memorandums of understanding (MOUs) regarding offpost response phase sampling.</p> <p><b>Expected Outcomes:</b> Clinical specimens for testing are logged, packaged correctly, and transported to a Laboratory Response Network (LRN) reference laboratory in an efficient manner while maintaining a legal chain of custody (if required), and laboratory test results from the LRN are securely transmitted in an efficient manner to appropriate recipients.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Clinical specimens are obtained from a patient by appropriately trained personnel using appropriate personal protective equipment (PPE) if required.</li> <li>2. Decision made to send the clinical specimens to the LRN reference laboratory for further testing based on an index of suspicion for bioterrorism or chemical terrorism evidence in the samples.</li> <li>3. Appropriate coordination made with the jurisdictional public health department and/or other agencies responsible for the applicable LRN facility to determine specimen amount, requirement for split samples to be sent simultaneously to confirmation laboratory (the Centers for Disease Control and Prevention [CDC], U.S. Army Medical Research Institute of Infectious Diseases [USAMRIID], or other lab), packaging and transportation requirements, and points of contact for results.</li> <li>4. A legal chain of custody, if required, is established for the submitted samples.</li> <li>5. Clinical specimens are transported to appropriate laboratories for testing.</li> <li>6. LRN securely transmits laboratory test results to appropriate recipients.</li> </ol> <p><b>Consequences:</b> Assessments based on laboratory data are not compromised due to inefficient or ineffective transport and testing of samples.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

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- ✓ What happened?
- ✓ What was supposed to happen?
- ✓ If there is a difference, why?
- ✓ What is the impact of that difference?
- ✓ What should be learned from this?
- ✓ What corrective actions are recommended?

### Preparedness and Coordination

1. Were plans and procedures in place for appropriately transporting clinical specimens to the LRN reference laboratory? Did they use them?
  - a. Were there written criteria for deciding which specimens to send to the LRN?
  - b. Who made the decision?
  - c. Was coordination made with the LRN?
  - d. Was a legal chain of custody required and if it was, was it established according to the appropriate level of law enforcement involvement (local, county, State, and/or Federal level)? Was it accomplished?
  - e. How soon after the decision to utilize the LRN were the samples on their way to the LRN?
  - f. How long did it take for the samples to reach the LRN?
2. Did the LRN securely transmit the laboratory test results to the appropriate recipient(s) in an efficient manner?
  - a. How long did it take for the results being sent from the LRN to reach the appropriate recipient(s)?

<b>Task # II-11-D: Transport Environmental Samples to Laboratory Response Network</b>	
<b>Outcome:</b> Emergency Assessment	<b>Location:</b> EOC/Public Health/HazMat
<b>Response Element:</b> EOC Staff/Public Health Staff/HazMat	<b>Jurisdiction:</b>
<b>Evaluator:</b>	<b>Contact #:</b>

<b>Task Information</b>	<b>Notes</b>
<p><b>Inputs:</b> Environmental samples collected from health care facilities, field stations, incident site, and screening stations.</p> <p><b>Conditions:</b> Availability of time; availability of communications systems; availability of laboratory support, plans and procedures, and memorandums of agreement (MOAs) and memorandums of understanding (MOUs) regarding offpost response phase monitoring and sampling.</p> <p><b>Expected Outcomes:</b> Environmental samples for testing are logged, packaged correctly, and transported to the Laboratory Response Network (LRN) reference laboratory in an efficient manner while maintaining a legal chain of custody (if required), and laboratory test results from the LRN are securely transmitted in an efficient manner to the appropriate recipients.</p> <p><b>Typical Steps:</b></p> <ol style="list-style-type: none"> <li>1. Environmental samples are obtained from health care facilities, field stations, incident site, and screening stations by appropriately trained personnel using appropriate personal protective equipment (PPE), if required.</li> <li>2. Decision made to send environmental samples to the LRN for further testing based on an index of suspicion for bioterrorism or chemical terrorism evident in the samples.</li> <li>3. Appropriate coordination made with the jurisdictional public health department and/or other agencies responsible for the LRN reference laboratory to determine sample amount, requirement for split samples to be sent simultaneously to a reference laboratory (such as State Public Health Laboratory) or national laboratory (such as the Centers for Disease Control and Prevention [CDC] or U.S. Army Medical Research Institute of Infectious Diseases [USAMRIID]), packaging and transportation requirements, and points of contact for results.</li> <li>4. A legal chain of custody, if required, is established for submitted samples.</li> <li>5. Clinical specimens are transported.</li> <li>6. LRN securely transmits laboratory test results to appropriate recipients.</li> </ol> <p><b>Consequences:</b> Assessments based on laboratory data are not compromised due to inefficient or ineffective transport and testing of samples.</p> <p><b>Note:</b> These are “typical” steps that you might expect to see a player carry out when performing this task. Please consult the specific jurisdiction’s plans and procedures for actual requirements.</p>	<p><i>Record time task starts and is completed. Describe any actions that appear to significantly help or impede achievement of the outcome.</i></p>

## Followup Analysis

*Upon completion of the day's exercise play, evaluators should compile their observations into a chronological narrative of events, describing outcomes achieved or not achieved. For any outcomes that are not achieved, the evaluator should analyze the sequence of events and attempt to determine the cause using the questions **at right**. The questions **below** may further help determine root cause.*

- ✓ What happened?
- ✓ What was supposed to happen?
- ✓ If there is a difference, why?
- ✓ What is the impact of that difference?
- ✓ What should be learned from this?
- ✓ What corrective actions are recommended?

### Preparedness and Coordination

1. Were plans and procedures in place for transporting environmental samples to the LRN? Did they use them?
  - a. Were there written criteria for deciding which samples to send to the LRN?
  - b. Who made the decision?
  - c. Was coordination made with the LRN?
  - d. Was a legal chain of custody required? If it was, was it established according to the appropriate level of law enforcement involvement (local, county, State, and/or Federal level)? Was it accomplished?
  - e. How soon after the decision to utilize the LRN were the samples on their way to the LRN?
  - f. How long did it take for the samples to reach the LRN?
2. Did the LRN securely transmit laboratory test results to appropriate recipient(s) in an efficient manner?
  - a. How long did it take for the results being sent from the LRN to reach the appropriate recipient(s)?